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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/059,630	01/29/2002	Terry R. Bloom	CTS-2172	5273
29184	7590	11/26/2003		
CTS CORPORATION			EXAMINER	
905 W. BLVD. N			KOPEC, MARK T	
ELKHART, IN 46502				
			ART UNIT	PAPER NUMBER
			1751	

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application N .	Applicant(s)
	10/059,630	BLOOM, TERRY R.
	Examiner Mark Kopec	Art Unit 1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)      4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_ .
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) Notice of Informal Patent Application (PTO-152)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.      6) Other: \_\_\_\_\_

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-20 are rejected under 35 U.S.C. 102(b)/(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over DeKeyser et al (4,806,159), Shoji et al (4,775,414) or Kay (4,746,838).

DeKeyser et al (4,806,159) discloses a plating activator composition. This activator composition consists essentially of at least 85% Ag, from 0.1 to 7% Pd, from 1% to 10% of an element selected from Cu, Si, Bi, Zn, Fe, Ni, Sn, Zr, Nb, Sb, Mn and combinations thereof (Abstract). The compositions may also contain a binder/vehicle system, made up of a 6% solution of N-50 ethylcellulose in pine-oil, the ethylcellulose having been supplied by Hercules Inc., Wilmington, Del. Terpineol can also be used as the vehicle system (Col 4, line 65-Col 5, line 5). See also example 15.

Shoji discloses Inorganic adhesives suitable for bonding metals to metals, metals to ceramics, or ceramics to ceramics with high bonding strength are disclosed, which contain a composite mechanical alloy powder comprising: (a) from about 10 to 60 wt % of particles of at least one of Cu and Ni; (b) from about 10 to 80 wt % of particles of at least one of Ti, Nb, and Zr; and (c) from about 10 to 80 wt % of Ag particles. The

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composite powder can be dispersed in an organic solvent to form a paste adhesive (Abstract). The composite powder of the present invention can be dispersed in an organic solvent and can be used in the form of the resulting paste. As the organic solvent, terepineol, butyl carbitol, texanol, butyl carbitol acetate, etc. can be used. The amount of the composite powder in the paste is suitably from about 60 to 90 wt wt%. In addition, 2 wt% or less of a surfactant (e.g., rosin wax) can be added in addition to the organic solvent, or ethyl cellulose can further be added as a binder (Col 7, lines 38-45). The reference additionally discloses particles sizes within the claimed range (Col 8, lines 20-30). See also examples 1, 12 and 39.

Kay discloses ink for use in forming resistive structures for use in a gas discharge display panel containing mercury vapor to inhibit cathode sputtering, the ink comprising a mixture of silver and nickel with the nickel being controllably oxidized to impart the desired resistivity to the mixture and the final resistive body in the display panel (Abstract). In the foregoing material, the nickel is in the form of a powder having a particle size in the range of about two to about ten microns. This particles size provides the optimum nickel surface for oxidation during the processing operation to achieve

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the desired resistance. The silver component is made up of a combination of silver flakes and silver powder. This use of flakes and powder also combines with the nickel powder to provide optimum packing of the silver and the nickel and optimum control of the overall conductivity of the final resistive body as it undergoes multiple firings during the manufacture of the panel. In the silver component, the silver powder has a particle size in the range of about 0.8 microns to about 1.2 microns. The silver flakes are less than about ten microns in length. The glass frit used in the ink of the invention is a low temperature binder glass which serves to insure proper wetting of the nickel and silver in the firing process used in forming the resistive body. The glass frit preferably has a melting point in the range of about 440.degree. C. to about 460.degree. C. The ink also includes a vehicle which is not a critical constituent and is provided to impart proper screening characteristics to the ink (Col 2, lines 39-65). Typical ink compositions embodying the invention include:

Constituent	Weight %
Silver Flake	20-30
Silver Powder	15-25

Spherical Nickel Powder

10-30

Glass Frit 20-25

Vehicle 13-20

The vehicle used in the ink of the invention is typically an ethyl cellulose/ester alcohol vehicle (Col 3, lines 25-27).

The references either specifically or inherently meet the instantly claimed limitations.

In the alternative that any minor modifications are necessary to meet the claimed limitations, such as minor variation in percentage of ingredients or selection of vehicle constituents, such modifications are well within the purview of the skilled artisan.

In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is 703 308-1088. The examiner can

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normally be reached on Monday - Thursday from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on 703 308-4708. The fax phone number for the organization where this application or proceeding is assigned is 703 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

  
Mark Kopec  
Primary Examiner  
Art Unit 1751

MK

November 21, 2003